

REMARKS

The amendment to the Specification is a clarifying editorial amendment. It does not introduce new matter. The amendment deletes information with respect to the invention that was inconsistent with the data indicated as comparative in Comparative Example 1, Table 1, page 11 of the specification.

New Claims 21-48 are supported by the disclosure in the Specification and the original slate of claims. They do not present new matter.

New Claims 21-40 are dependent claims directed to certain preferred embodiments of the invention. New Claims 21 and 22 introduce limitations regarding drying the silicon containing carrier. Such claims are supported, for example, by the disclosure in paragraph [0011] at page 4, lines 1-9, of the Specification. New Claims 23 and 31 (and claims dependent thereon) introduce limitations that further define the silicon containing carrier as a silica carrier or one comprising zeolites. Such claims are supported, for example, by the disclosure in paragraph [0006] at page 2, lines 8-15, of the Specification. New Claim 24 introduces limitations on certain contaminants that might be present in the silica gel carrier. It is supported, for example, by the disclosure in paragraphs [0007], [0008] and [0009] at page 2, lines 16-31, of the Specification. New Claims 25-29 introduce limitations that further define the silicon containing carrier by its particle size or surface area. Such claims are supported, for example, by the disclosure in paragraphs [0010] and [0013] at page 3, lines 22-28, and page 5, lines 5-8, of the Specification. New Claim 32 indicates the silicon containing carrier used in the claimed process has a low water content. It is supported, for example, by the disclosure in paragraph [0011] at page 3, lines 29-31, of the Specification. New Claims 33-37 include various combinations of such limitations regarding the silicon containing carrier and they are supported by the indicated disclosure in the Specification. New Claims 38-40 are further supported, for example, by the disclosure in paragraphs [0014] through [0020], at pages 5-7 of the Specification.

New Claims 41-48 are directed to embodiments of the invention that utilize a gas stream comprising at least 80 %wt titanium halide. These new claims are supported, for example, by the disclosure in paragraph [0015] of the Specification, and more specifically in the sentence bridging pages 5 and 6 of the Specification.

The Bases of Rejection:

1. **Restriction Requirement:**

The slate of claims was subjected to a restriction requirement:

- I. Claims 1-14, drawn to a process of making catalyst.
- II. Claims 15-20, drawn to a process of making alkylene oxide.

2. **35 U.S.C. §112, first paragraph:**

Claims 1, and 8-14 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

3. **35 U.S.C. §102(b):**

Claims 1-14 were rejected under 35 U.S.C. §102(b) as anticipated by Joustra et al. EP 0 345 856B1 ('856).

4. **35 U.S.C. §103(a):**

Claims 4 and 9 were rejected under 35 U.S.C. §103(a) as obvious over the '856 reference in view of Han et al. US 6,114,552 ('552).

Applicants' Arguments:

The election to prosecute the Claims of Group I (i.e., Claims 1-14) made during the phone conference with Examiner Solola on May 10, 2005, is hereby confirmed. The election is made without traverse. Claims to the non-elected invention (i.e., Group II, Claims 15-20) have been cancelled and withdrawn from consideration, without prejudice. Applicants reserve the right to file a divisional application or take such action as they deem necessary with respect to the non-elected invention.

The rejection of Claims 1 and 8-14 under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement is respectfully traversed. Examiner refers on page 5 of the Office Action (first two full paragraphs) to the claimed terms "silicon containing carrier" and "titanium halide" as the source of his concern. However, the primary term of contention is believed to be the "silicon containing carrier" since Examiner did not apply the rejection to Claims 2 and 4-7. With respect to the silicon containing carrier, Applicants stated on page 2 of the Specification at lines 10-12: "In principle, any silicon containing carrier may be suitable for use in the preparation process according to the present invention." Applicants

believe that this language would “reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention,” Examiner’s conclusion to the contrary notwithstanding. The Specification describes suitable silicon containing carriers and titanium halide reactants (see p. 2, lines 8 – p. 3, line 28; p. 5, lines 9- 20). These are known classes of compounds having many members. The Specification, including the Examples, is such that it would not require any undue experimentation for the skilled artisan to verify that any particular, named or unnamed, member of the classes is suitable for use in the claimed invention. Examiner has presented no reason why any particular member of either of the known classes would be inoperable in the claimed invention. Applicants are entitled to claim their invention broadly and are not limited to just the preferred embodiments, although certainly they are entitled to present claims to such preferred embodiments. The current slate of claims is believed to fully comply with the written description requirements of 35 U.S.C. §112, first paragraph. Reconsideration of this basis of rejection is requested.

Compliance with the written description requirement is a question of fact, and the boundaries of the requirement have been developed on a case-by-case basis. See, for example, the decisions of *Ralston Purina Co. v. Far-Mar-Co, Inc.* 772 F.2d 1570, 227 USPQ 177 (Fed. Cir. 1985); and *In re Alton*, 76 F.3d 1168, 37 USPQ2d 1578 (Fed. Cir. 1996). The Federal Circuit has indicated that because of the fact-sensitive nature of the inquiry regarding the written description requirement under 35 U.S.C. §112, first paragraph, caution in application of precedents in this area is required. *Union Oil. Co. of Calif. v. Atlantic Richfield Co.*, 208 F.3d 989, 54 USPQ2d 1227 (Fed. Cir. 2000). In this case, it is believed that the facts show compliance with the written description requirement. Therefore, Examiner’s reliance on the **Lockwood** decision is believed to be unwarranted, and Applicants respectfully request that the rejection be withdrawn.

The rejection of Claims 1-14 under 35 U.S.C. §102(b) for being anticipated by the ‘856 reference is erroneous and respectfully traversed. Anticipation is also a question of fact. *Eolas Technologies Inc. et al. v. Microsoft Corp.*, 399 F.3d 1325 (Fed. Cir. 2005). In order for a reference to be a valid basis of rejection under 35 U.S.C. §102(b), a single reference must teach each and every limitation of the claimed invention and identically describe the subject matter claimed. This has been supported by a host of court decisions. See, for example, the **Eolas**

Technologies decision cited above and *Glaverbel S.A. v. Northlake Mkt'g & Supply, Inc.* 45 F.3d 1550, 33 USPQ2d 1496 (Fed. Cir. 1995). Absence from the reference of any claimed element negates anticipation. Almost is not enough. See, for example, *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). Joustra et al. does not meet the standard imposed by 35 U.C.C. §102(b).

The process used in the '856 reference for preparation of the catalyst typically uses a carrier gas to carry titanium tetrachloride onto the solid silica and/or inorganic silicate carrier. This is illustrated by the cited reference at p. 3, line 39 and in the example at page 6, lines 54 and 55. The '856 reference does not disclose or suggest a gas stream consisting of titanium halide, which is a feature of present Claim 1. The reference also does not disclose a gas stream comprising at least 80 wt% titanium halide, which is a feature of present Claim 41.

The advantage of the invention, as presently claimed, over the '856 reference (i.e., increased selectivity) is shown in Examples 1 and 2 and summarized in Tables 1 and 2 of the Specification. The cited reference does not teach the presently claimed processes, and the results of these processes were unexpected and unobvious. Accordingly, the '856 reference does not anticipate or render obvious the present invention. Present Claims 1 and 41 and the claims (directly or indirectly) dependent on Claims 1 and 41 are novel and unobvious over the '856 reference. Therefore, Applicants respectfully request that the rejection be withdrawn.

In addition, the present invention may be further distinguished from the '856 reference by the use of a silicon containing carrier: (a) that has been heated at a temperature of 200° to 700° C to achieve a low water content, and/or one that has (b) a weight average particle size of at most 2 millimeters (mm), and/or the use of a silicon containing carrier that (c) comprises zeolites (see eg present Claims 10, 21 and 31). The cited reference does not describe or suggest a process using a silicon containing carrier having such properties, alone or in combination. Accordingly, the '856 reference does not anticipate or render obvious the invention claimed in the dependent claims directed to such preferred embodiments.

The basis of rejection of Claims 4 and 9 under 35 U.S.C. §103(a) for being obvious over the '856 reference in view of the '552 reference is erroneous and respectfully traversed. To establish a *prima facie* basis for obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally

available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination must be found in the prior art, and not based on applicant's disclosure [MPEP § 2142; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).]

As argued above, the '856 reference does not disclose the subject matter of Claims 1 and 41. In the same manner, the '552 reference, does not disclose the subject matter of Claims 1 and 41 (col. 2, lines 26-30; col. 4, lines 37-48). Thus, the feature of a gas stream consisting of titanium tetrahalide or comprising greater than 80 wt% titanium tetrahalide is not disclosed in either reference. Therefore, all the claim limitations of the rejected Claims 4 and 9 are not found in either reference or the combination of the references. It is respectfully submitted that the Examiner: (1) did not consider all of the claim limitations, and, therefore, did not consider the claimed subject matter as a whole, as required by 35 USC §103, and (2) did not establish a *prima facie* case of obviousness under 35 U.S.C. §103(a). See, *In re Rijckaert*, 9 F3d 1531, 1532, 28 USPQ2d 1955 (Fed. Cir. 1993). Therefore, Applicants respectfully request that the rejection be withdrawn.

CONCLUSION:

In view of the above amendments and remarks, Applicants believe the instant application to be in condition for allowance and respectfully request that such action be taken.

Respectfully submitted,

JOHANNES PETRUS VAN DER LINDEN ET AL.

By: 

Their Attorney, Jennifer D. Adamson
Registration No. 47,379
(713) 241-3901

P. O. Box 2463
Houston, Texas 77252-2463